	SECTION-I	
	Invited Lectures	
1.	Spectroscopy—A Long Journey	
•	D.K. Rai	
2.	A Novel Method of Coherent Two-Photon Excitation for Selective	
	G.P. Gupta and B.M. Suri	
3.	Quantum Interference and Lasing without Inversion and a Vector Atom Model G.D. Baruah	19
4.	Conversion of Classical Laser Light to Non-Classical Light	2
5.	Hari Prakash and Devendra Kumar Mishra Improvement of Conversion Efficiency of Nonlinear Frequency Mixing Processes to Obtain Widely Tunable Coherent Radiation for Spectroscopic Applications	3:
	Udit Chatterjee and Sudipta Gangopadhyay	
6.	New Methods for High-Density Holographic Data Storage and	42
	Bhargab Das, Joby Joseph and Kehar Singh	
7.	Collision Rates for Asymmetric Top Molecules and their Applicationin Astronomy and Astrophysics  Suresh Chandra	62
8.	Investigations by Using Laser Flash Photolysis to Detect  Long-Lived Charge-Separated Species	75
	Sudeshna Bhattacharya and Tapan Ganguly	1
9.	FT-IR Spectroscopic and Statistical Data Analysis of Myeloid Cells of Leukemia  R.A. Singh and Santosh Prabhakar	79
10.	Molecules: (e, 2e) Collision Processes	88
	Yugal Khajuria	
11.	Photoacoustic Spectroscopy in Food Science	95

Con		
27.	Spectroscopy of Coherently Prepared Three- and Four-level Atomic Medium	261
		267
28.	Niharika Singh, Ayan Ray, Y.B. Kale and B.W. Sugarap  Effect of Temperature on the Molecular Structural Changes of  SnO <sub>2</sub> Nanopowders via a Sol-Gel Method	20.
		222
20	S. Gnanam and V. Rajendran Sub-100 Femtosecond Pulse Propagation in Nonlinear Optical Crystals	2/2
29.	Debasis Swain and S. Venugopal Rao	
	Section-III	
	Contributory Lectures	
30.	PCA of LIBS Spectra to Differentiate Healthy and Caries	279
	A.K. Pathak, S. Rai, V.K. Singh, N.K. Rai and A.K. Rai	
31.	Development of Laser Induced Breakdown Spectroscopy at ACRHEM	287
# C	for Applications Relevant to High Energy Materials	
	S. Sreedhar, S. Venugopal Rao, P. Prem Kiran, Surya P. Tewari and G. Manoj Kumar	
32.	Be Aware/Beware of Toxic Substances in the Neighborhood!	291
	Caroline Michael and S.M. Kalaivani Diwakar	
33.	High Resolution Infrared Spectroscopy of $V_1$ Band of Difluromethane (CD <sub>2</sub> F <sub>2</sub> )	297
	Himal Bhatt, Param Jeet Singh, Naveen Kumar, M.N. Deo and K. Kawaguchi	
34.	Asymmetry of Laser Induced Shockwaves in Air	302
54	Ch. Leela, Surya P. Tewari and P. Prem Kiran	
35.	FTIR and Humidity Sensing Studies of Polyaniline/Al <sub>2</sub> O <sub>3</sub> Composites	308
36.	The Observed and Predicted Spectrum of Singly Ionized Chromium: Cr II	312
37.	Characterization of Some Metal Complexes by Spectral and	318
	Andinicrobial Activity Studies	510
••	Ritu Rani Chaudhary, P.N. Saxena and Anuj Kumar Gangwar	
38.	Interaction with Intense Laser Pulses	326
17.7	S. Suresh and A.K. Chaudhary	
39.	Radiation Hazard Evaluation of Soil and Water Samples around Century Paper Mill (Lalkuan) Contaminated with Flyach	333
40	Sanianu Mukherjee, Surendra Kumar and Anione Sci	
40.	as a Blo-Diagnostic Tool for Detection of	227
41.		337
71.	Vibrational Dynamics of Trans 1, 4-Poly (2, 3-Dichlorobutadiene)  Archana Gupta, Neetu Choudhary, Poonam Tandon and V.D. Gupta	342
	y, contain Tandon and V.D. Gupta	

42.	Molecular Structure and Vibrational Spectra of Pyridoxamine: Band	350
	P. Singh, G. Srivastav, R. Singh, M. Kumar, S. Jaiswal and R.A. Yadav	
43.	On the Nature of Strong Fluorescence of Alocasia Culculata Schot	357
	Mitali Konwar, N. Dehingia and G.D. Baruah	
44.	Material for White Light Emitting Diodes	361
	Y. Dwivedi and S.B. Rai	501
45.	Cyano-Based Chitosan Derivative: Nd-YAG Laser for Second	267
	Harmonic Generation (SHG) Study	367
	Santosh Kumar, S.P. Singh, L. Mishra, P.K. Datta and P.K. Dutta	
46.	DFT Studies on 3'-azido 3' Dooyathmidina	271
	DFT Studies on 3'-azido-3'-Deoxythmidine	371
47.	Nivedita Jain, Santosh Prabhakar and R.A. Singh	
47.	Natural Masers	376
4.0	B.K. Kumthekar, M.K. Sharma and Suresh Chandra	
48.	Non-Classical Light Generation by Beam Splitter with Third-Order Nonlinearity	382
	Hari Prakash and Devendra Kumar Mishra	
49.	Synthesis and Optical Properties of ZnO Nanoparticles Doped with Manganese	387
	D. Sridevi and K.V. Rajendran	-
50.	Preparation of SnS <sub>2</sub> Nanoparticles and its Characterization	392
	by Solvothermal Process	372
	K. Anandan and V. Rajendran	
51.	Synthesis of ZnS:Mn Composite Quantum Dot and its Applications	308
	in Light Emitting Diode	370
	Atul Kumar Gupta, Ram Kripal and A.C. Pandey	
52.	Analytical Calutions CM	102
(	Shock Waves in a Self-Gravitating and Rotating Gas	402
	RK Anand	
53.	Strong Shock Waves Moving in a Non-Ideal Gas	111
55.	R. K. Anand and Sangasta	414
54.	Steady State Solution for the Interaction Problem	400
54.	Steady State Solution for the Interaction Problem	422
~ ~	Sudha Singh	
55.	Spectroscopic (ESR and Optical Absorption) Studies of Cr3+ Ion Doped	430
	in D-Gluconic Acid Monohydrate Single Crystals Applicable for	
	Materials Characterization	
	Har Govind and Ram Kripal	
56.	Investigation of the New Relaxation Modes in the Antiferroelectric Phase of	438
	an Antiferroelectric Liquid Crystal 4H6Bi(S) under Bias Electric Field	
	Suman Kumari, I.M.L. Das and R. Dabrowski	
57.	Spectroscopic Studies of Crystal Violet Dye in Sol-Gel Glasses	443
	T. Saikia and S. Rai	
58.	Optical Characterization of ZnS Nanocrystals Embedded in SiO <sub>2</sub>	448
- 0.	Matrix by Atom Beam Co-Sputtering	
1	L. Kumar, M. Mall, Shiv P. Patel, D. Kabiraj and D.K. Awasthi	451
Auin	or Index	751